

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The office action dated January 16, 2004 has been received and its contents carefully reviewed.

Applicant thanks the Examiner for accepting the drawings filed with the application on December 26, 2001.

Claims 5 and 13-16 are withdrawn from consideration after the Election of Species of October 27, 2003. Claims 1-4, 6-12, and 17-20 have been examined. Applicants amend claim 1 to correct a minor grammatical error.

In the Office Action, claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,877,830 to Shimada. Claim 1 is also rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,513,028 to Sono. Claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Sono. Claims 2-4, 6-12, and 17-20 U.S. Patent 6,177,970 B1 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sono.

The rejection of claims 1-4, 6-12, and 17-20 is respectfully traversed and reconsideration is requested. Independent claim 1 is allowable over the cited references in that it recites a combination of elements including, for example, “the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions of the matrix arrangement”. None of the cited references including Shimada and Sono, singly or in combination, teaches or suggests at least this feature of the claimed invention.

The Examiner alleges that Shimada discloses this feature. Applicants respectfully disagree. For example, Shimada discusses “the aperture ratio of the display device” (Shimada, column 6, lines 35-37), not that “the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions”. Furthermore, Figure 1 of Shimada cited by the Examiner does not show that “the black matrix overlaps the pixel electrodes 11” as the Examiner alleges (Office Action, page 3, line 6). Figure 1 of Shimada shows “the black mask 13 is placed so as to partially overlap a portion of the

outermost...gate signal line 2” (Shimada, column 6, lines 9-11). Therefore, Shimada does not disclose or suggest “the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions” as recited in claim 1.

The Examiner also alleges that Sono discloses this feature of the claim. Applicants respectfully disagree. Sono does not disclose or suggest “the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions”. Sono discloses “three pixel electrodes 4 at the right-hand end constitute dummy pixels. In said dummy pixels, the TFT element (not shown) connected to each pixel electrode is connected to a scanning line and a display line, either of which is however not connected to the driving circuit, whereby said dummy pixels are maintained in electrically insulated state” (Sono, column 4, lines 34-46 and Fig. 5). However, these pixel electrodes do not have “an aperture ratio lower than that of the pixel regions in other portions” as recited by the claim.

Accordingly, Applicants respectfully submit that claim 1 and claims 2-4 and 6 which depend from claim 1 are allowable over the cited references.

Independent claim 7 is allowable over the cited references in that it recites a combination of elements including, for example, “the pixel electrodes at a peripheral portion of the matrix arrangement are narrower than the pixel electrodes at other portions of the matrix arrangement”. None of the cited references including Shimada and Sono, singly or in combination, teaches or suggests at least this feature of the claimed invention.

The Examiner alleges that Sono discloses this feature of the claim. Applicants respectfully disagree. Sono does not disclose or suggest “the pixel electrodes at a peripheral portion of the matrix arrangement are narrower than the pixel electrodes at other portions of the matrix arrangement”. Sono discloses “three pixel electrodes 4 at the right-hand end constitute dummy pixels. In said dummy pixels, the TFT element (not shown) connected to each pixel electrode is connected to a scanning line and a display line, either of which is however not connected to the driving circuit, whereby said dummy pixels are maintained in electrically insulated state” (Sono, column 4, lines 34-46 and Fig. 5). However, they are not “narrower than the pixel electrodes at other portions of the matrix arrangement” as recited by claim 7.

Accordingly, Applicants respectfully submit that claim 7 and claims 8-10 which depend from claim 7 are allowable over the cited references.

Independent claim 11 is allowable over the cited references in that it recites a combination of elements including, for example, “portions of the black matrix layer corresponding to at least one of a first data line and a last data line among the data lines has a greater width than portions of the black matrix layer corresponding to other data lines”. None of the cited references including Shimada and Sono, singly or in combination, teaches or suggests at least this feature of the claimed invention.

The Examiner alleges that Sono discloses this feature of the claim. Applicants respectfully disagree. Sono does not disclose or suggest “portions of the black matrix layer corresponding to at least one of a first data line and a last data line among the data lines has a greater width than portions of the black matrix layer corresponding to other data lines”. Sono discusses “the shape of the step, to be formed adjacent to the pixel area, may be made same as, substantially same as or similar to that of said pixel area by a dummy area”. (Sono, column 7, lines 38-50). Sono does not discuss the width of the shield 29. Therefore, Sono does not disclose, teach, or suggest “portions of the black matrix layer corresponding to at least one of a first data line and a last data line among the data lines has a greater width than portions of the black matrix layer corresponding to other data lines”.

Accordingly, Applicants respectfully submit that claim 11 and claim 12 which depends from claim 11 are allowable over the cited references.

Independent claim 11 is allowable over the cited references in that it recites a combination of elements including, for example, “portions of the black matrix layer corresponding to at least one of a first data line and a last data line among the data lines has a greater width than portions of the black matrix layer corresponding to other data lines”. None of the cited references including Shimada and Sono, singly or in combination, teaches or suggests at least this feature of the claimed invention.

The Examiner alleges that Sono discloses this feature of the claim. Applicants respectfully disagree. Sono does not disclose or suggest “width of one of a first data line and a

last data line among the data lines is greater than widths of other data lines, and width of portions the black matrix pattern corresponding to one of the first gate line, the first data line and the last data line is greater than widths of portions of the black matrix pattern not corresponding to the one of the first gate line, the first data line, and the last data line”. Sono discusses “the shape of the step, to be formed adjacent to the pixel area, may be made same as, substantially same as or similar to that of said pixel area by a dummy area”. (Sono, column 7, lines 38-50). Sono does not discuss the width of the shield 29. Therefore, Sono does not disclose, teach, or suggest “width of one of a first data line and a last data line among the data lines is greater than widths of other data lines, and width of portions the black matrix pattern corresponding to one of the first gate line, the first data line and the last data line is greater than widths of portions of the black matrix pattern not corresponding to the one of the first gate line, the first data line, and the last data line”.

Accordingly, Applicants respectfully submit that claim 17 and claims 18-20 which depend from claim 17 are allowable over the cited references.

Applicants believe the foregoing arguments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

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